Complete Summary

GUIDELINE TITLE

Clinical guideline on management of the developing dentition and occlusion in pediatric dentistry.

BIBLIOGRAPHIC SOURCE(S)

American Academy of Pediatric Dentistry (AAPD). Clinical guideline on management of the developing dentition and occlusion in pediatric dentistry. Chicago (IL): American Academy of Pediatric Dentistry (AAPD); 2005. 18 p. [133 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Academy of Pediatric Dentistry. Clinical guideline on management of the developing dentition in pediatric dentistry. Chicago (IL): American Academy of Pediatric Dentistry; 2001. 4 p.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Unfavorable dentofacial development, including:

- Deleterious oral habits leading to unfavorable dentofacial development
- Hypodontia (congenitally missing teeth)
- Supernumerary teeth (hyperdontia)
- Ectopic eruption
- Ankylosis

- Toothsize/archlength discrepancy and crowding
- Anterior and posterior crossbite
- Malocclusion (class II and class III)

GUIDELINE CATEGORY

Counseling
Management
Prevention
Risk Assessment
Treatment

CLINICAL SPECIALTY

Dentistry
Pediatrics

INTENDED USERS

Allied Health Personnel
Dentists
Nurses
Physicians

GUIDELINE OBJECTIVE(S)

To provide guidance for the appropriate management of developing dentition in the pediatric patient

TARGET POPULATION

Infants, children, and adolescents

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment and Diagnosis

1. Clinical examination
    - Facial analysis
    - Intraoral examination
    - Functional analysis
2. Maintenance of diagnostic records
    - Extraoral and intraoral photographs
    - Diagnostic dental casts
    - Intraoral and panoramic radiographs
    - Lateral and anterior-posterior cephalograms
    - Magnetic resonance imaging
    - Computer assisted tomography
3. Completion of differential diagnosis and diagnostic summary
4. Completion of a sequential treatment plan

Management and Treatment

1. Habit elimination (patient/parent counseling, behavior modification techniques, myofunctional therapy, appliance therapy, or referral to other providers including but not limited to orthodontists, psychologists, myofunctional therapists, or otolaryngologists)
2. Tooth extraction
3. Orthodontical space closing
4. Placement of prostheses or implants
5. Orthodontical alignment of permanent teeth
6. Impacted tooth management (elastic or metal orthodontic separators, distal tipping of permanent molar)
7. Space maintenance and space regaining: fixed appliances (e.g., band and loop, crown and loop, passive lingual arch, distal shoe, Nance appliance, transpalatal arch) and removable appliances (e.g., partial dentures, Hawley appliance, lip bumper, headgear).
8. Crossbite correction
9. Malocclusion assessment and correction
10. Other treatment modalities (interproximal reduction, restorative bonding, veneers, crowns, implants, and orthognathic surgery)

MAJOR OUTCOMES CONSIDERED

- Reduction in deleterious oral habits
- Functional and esthetic outcomes of corrective procedures

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A MEDLINE literature search was conducted using the terms "ankylosis," "anterior crossbite," "Class II malocclusion," "Class III malocclusion," "dental crowding," "ectopic eruption," "impaction," "obstruction sleep apnea syndrome (OSAS)," "occlusal development," "oligodontia," "oral habits," "posterior crossbite," "space maintenance," and "tooth size/arch length discrepancy."

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The oral health policies and clinical guidelines of the American Academy of Pediatric Dentistry (AAPD) are developed under the direction of the Board of Trustees, utilizing the resources and expertise of its membership operating through the Council on Clinical Affairs (CCA).

Proposals to develop or modify policies and guidelines may originate from 4 sources:

1. The officers or trustees acting at any meeting of the Board of Trustees
2. A council, committee, or task force in its report to the Board of Trustees
3. Any member of the AAPD acting through the Reference Committee hearing of the General Assembly at the Annual Session
4. Officers, trustees, council and committee chairs, or other participants at the AAPD's Annual Strategic Planning Session

Regardless of the source, proposals are considered carefully, and those deemed sufficiently meritorious by a majority vote of the Board of Trustees are referred to the CCA for development or review/revision.

Once a charge (directive from the Board of Trustees) for development or review/revision of an oral health policy or clinical guideline is sent to the CCA, it is assigned to 1 or more members of the CCA for completion. CCA members are instructed to follow the specified format for a policy or guideline. All oral health policies and clinical guidelines are based on 2 sources of evidence: (1) the scientific literature; and (2) experts in the field. Members may call upon any expert as a consultant to the council to provide expert opinion. The Council on Scientific Affairs provides input as to the scientific validity of a policy or guideline.

The CCA meets on an interim basis (midwinter) to discuss proposed oral health policies and clinical guidelines. Each new or reviewed/revised policy and guideline is reviewed, discussed, and confirmed by the entire council.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Once developed by the Council on Clinical Affairs (CCA), the proposed policy or guideline is submitted for the consideration of the Board of Trustees. While the board may request revision, in which case it is returned to the council for modification, once accepted by majority vote of the board, it is referred for Reference Committee hearing at the upcoming Annual Session. At the Reference Committee hearing, the membership may provide comment or suggestion for alteration of the document before presentation to the General Assembly. The final document then is presented for ratification by a majority vote of the membership present and voting at the General Assembly. If accepted by the General Assembly, either as proposed or as amended by that body, the document then becomes the official American Academy of Pediatric Dentistry (AAPD) oral health policy or clinical guideline for publication in the AAPD's Reference Manual and on the AAPD's Web site.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Clinical Examination, Pretreatment Records, Differential Diagnosis, and Treatment Plan

A thorough clinical examination, appropriate pretreatment records, differential diagnosis, sequential treatment plan, and progress records are necessary to manage any condition affecting the developing dentition.

Clinical examination should include:

1. Facial analysis to:
    a. Identify adverse transverse growth patterns including asymmetries (maxillary and mandibular)
    b. Identify adverse vertical growth patterns
    c. Identify adverse sagittal (anteroposterior) growth patterns and dental anteroposterior (AP) occlusal disharmonies
    d. Assess esthetics and identify orthopedic and orthodontic interventions that may improve esthetics and resultant self-image and emotional development
2. Intraoral examination to:

a. Assess overall oral health status
b. Determine the functional status of the patient's occlusion

3. Functional analysis to:

    a. Determine functional factors associated with the malocclusion
    b. Detect deleterious habits
    c. Detect temporomandibular joint dysfunction, which may require additional diagnostic procedures

Diagnostic records may be needed to assist in the evaluation of the patient's condition and for documentation purposes. Prudent judgment is exercised to decide the appropriate records required for diagnosis of the clinical condition.

Diagnostic records may include:

1. Extraoral and intraoral photographs to:
    a. Supplement clinical findings with oriented facial and intraoral photographs
    b. Establish a database for documenting facial changes during treatment
2. Diagnostic dental casts to:

    a. Assess the occlusal relationship
    b. Determine arch length requirements for intra-arch tooth size relationships
    c. Determine arch length requirements for interarch tooth size relationships
    d. Determine location and extent of arch asymmetry
3. Intraoral and panoramic radiographs to:

    a. Establish dental age
    b. Assess eruption problems
    c. Estimate the size and presence of unerupted teeth
    d. Identify dental anomalies/pathology
4. Lateral and anteroposterior (AP) cephalograms to:

    a. Produce a comprehensive cephalometric analysis of the relative dental and skeletal components in the anteroposterior, vertical, and transverse dimensions
    b. Establish a baseline growth record for longitudinal assessment of growth and displacement of the jaws
5. Other diagnostic views (e.g., magnetic resonance imaging and computed tomographic scans) for hard and soft tissue imaging as indicated by history and clinical examination

    A differential diagnosis and diagnostic summary are completed to:

    a. Establish the relative contributions of the dental and skeletal structures to the patient's malocclusion
    b. Prioritize problems in terms of relative severity
    c. Detect favorable and unfavorable interactions that may result from treatment options for each problem area

d. Establish short-term and long-term objectives
e. Summarize the prognosis of treatment for achieving stability, function and esthetics

A sequential treatment plan will:

a. Establish timing priorities for each phase of therapy
b. Establish proper sequence of treatments to achieve short-term and long-term objectives
c. Assess treatment progress and update the biomechanical protocol accordingly on a regular basis

Stages of Development of Occlusion

See original guideline document for explanation of the stages of development.

Treatment Considerations

The developing dentition should be monitored throughout eruption. This monitoring at regular clinical examinations should include, but not be limited to, diagnosis of missing, supernumerary, developmentally defective, and fused or geminated teeth, ectopic eruption, and space and tooth loss secondary to caries. Radiographic examination, when appropriate and feasible, should accompany clinical examination. Diagnosis of anomalies of primary or permanent tooth development and eruption should be made in order to inform the patient's parent and to plan and recommend appropriate intervention. This evaluation is ongoing throughout the developing dentition, at all stages.

Primary Dentition Stage

Anomalies of primary teeth and eruption may not be evident/diagnosable prior to eruption, due to the child's not presenting for dental examination or to a radiographic examination not being possible in a young child. However, evaluation should be accomplished when feasible. The objectives of evaluation include identification of all anomalies of tooth number and size (as above), anterior and posterior crossbites, and presence of habits along with their dental and skeletal sequelae. Radiographs are taken with appropriate clinical indicators or based upon risk assessment/history.

Early Mixed Dentition Stage

Palpation for unerupted teeth should be part of every examination. Panoramic, occlusal, and periapical radiographs as indicated, at the time of eruption of the lower incisors and first permanent molars, provide diagnostic information concerning anomalies of tooth numbers (e.g., missing, supernumerary, fused, geminated), tooth size and shape (peg or small lateral incisors), and positions (e.g., ectopic first permanent molars). Space analysis can be used to evaluate arch length/crowding at the time of incisor eruption.

Mid-to-Late Mixed Dentition

Ectopic tooth positions should be diagnosed, especially canines, bicuspids, and second permanent molars.

Adolescent Dentition Stage

If not instituted earlier, orthodontic diagnosis and treatment should be planned for Class I crowded, Class II, and Class III malocclusions as well as posterior and anterior crossbites. Third molars should be monitored as to position and space and parents informed.

Early Adult Dentition Stage

Third molars should be evaluated. If orthodontic diagnosis has not been accomplished, recommendations should be made as necessary.

Objectives

At each stage, the objectives of intervention/treatment include reducing adverse growth, preventing increasing dental and skeletal disharmonies, improving esthetics of the smile, the accompanying positive effects on self-image, and improving the occlusion.

Primary Dentition Stage

Habits and posterior crossbites should be diagnosed and addressed as early as feasible. Parents should be informed of findings of adverse growth and developing malocclusions. Interventions/treatment can be recommended if diagnosis can be made, treatment is appropriate and possible, and parents are supportive and desire to have treatment done.

Early Mixed Stage

Treatment should address habits, arch length shortage, prevention of crowded incisors, intervention for ectopic molars and incisors, holding of leeway space, crossbites, and adverse skeletal growth, taking advantage of high rates of growth, and prevention of worsened adverse dental and skeletal growth.

Mid-to-Late Mixed Dentition Stage

Intervention for ectopic teeth may include extractions and space maintenance to aid eruption and reduce the risk of need for surgical bracket placement and orthodontic traction. Intervention for treatment of skeletal disharmonies and crowding may be instituted at this stage.

Adolescent Dentition Stage

In full permanent dentition, final orthodontic diagnosis and treatment can provide the most functional occlusion.

Early Adult Dentition Stage

Third molar position or space can be evaluated and, if indicated, be removed. Full orthodontic treatment should be recommended if needed.

Oral Habits

Treatment Considerations

Management of an oral habit is indicated whenever the habit is associated with unfavorable dentofacial development or adverse effects on child health, or when there is a reasonable indication that the oral habit will result in unfavorable sequelae in the developing permanent dentition. Any treatment must be appropriate for the child's development, comprehension, and ability to cooperate. Habit treatment modalities include patient/parent counseling, behavior modification techniques, myofunctional therapy, appliance therapy, or referral to other providers including but not limited to orthodontists, psychologists, myofunctional therapists, or otolaryngologists. Use of an appliance to manage oral habits is indicated only when the child wants to stop the habit and would benefit from a reminder.

Objectives

Treatment is directed toward decreasing or eliminating the habit and minimizing potential deleterious effects on the dentofacial complex.

Congenitally Missing Primary and Permanent Teeth

Treatment Considerations

With congenitally missing permanent maxillary incisor(s) or mandibular second premolar(s), the decision to extract the primary tooth and close the space orthodontically versus opening the space orthodontically and placing a prosthesis or implant depends on many factors. For maxillary laterals, the dentist must (1) move the maxillary canine mesially and use the canine as a lateral incisor or (2) create space for a future lateral prosthesis or implant. Factors that influence the decision are the age of the patient, shape of the canine, the position of the canine, the child's occlusion and amount of crowding, depth of the bite, and the quality and quantity of bone in the edentulous area. Early extraction of the primary canine and/or lateral may be needed. Opening space for a prosthesis or implant requires less tooth movement but the space needs to be maintained with an interim prosthesis, especially if an implant is planned. Moving the canine into the lateral position produces little facial change but the resultant tooth size discrepancy often does not allow a canine guided occlusion.

For congenitally missing premolars, the primary molar either may be maintained or extracted with subsequent placement of a prosthesis or orthodontically closing the space. Maintaining the primary second molar may cause occlusal problems due to its larger mesiodistal diameter, as compared to the second premolar. Reducing the width of the second primary molar is a consideration, but root resorption and subsequent exfoliation may occur. In crowded arches or with multiple missing premolars, extraction of the primary molar(s) can be considered, especially in mild Class III cases. For a single missing premolar, if maintaining the

primary molar is not possible, placement of a prosthesis or implant should be considered. Consultation with an orthodontist and/or prosthodontist may be required. In addition, preserving the primary tooth may be indicated in certain cases.

Objectives

Treatment is directed toward an esthetically pleasing occlusion that functions well for the patient.

Supernumerary Teeth (Primary, Permanent, and Mesiodens)

Treatment Considerations

Management and treatment of hyperdontia differs if the tooth is primary or permanent. Primary supernumerary teeth normally are accommodated into the arch and usually erupt and exfoliate without complications. Extraction of an unerupted supernumerary tooth during the primary dentition usually is not done to allow it to erupt; surgical extraction of unerupted supernumerary teeth can displace or damage the permanent incisor. Removal of a mesiodens or other permanent supernumerary incisor results in eruption of the permanent adjacent normal incisor in 75% of the cases. Extraction of an unerupted supernumerary during the early mixed dentition allows for a normal eruptive force and eruption of the permanent adjacent normal incisor. Later removal of the mesiodens reduces the likelihood that the adjacent normal permanent incisor will erupt on its own, especially if the apex is completed. Inverted conical supernumeraries can be harder to remove if removal is delayed, as they can migrate deeper into the jaw. After removal of the supernumerary, clinical and radiographic follow-up is indicated in 6 months to determine if the normal incisor is erupting. If there is lack of eruption after 6 to 12 months and sufficient space exists, surgical exposure and orthodontic extrusion is needed.

Objectives

Removal of supernumerary teeth should facilitate eruption of permanent teeth and encourage normal alignment. In cases where normal alignment or spontaneous eruption does not occur, further orthodontic treatment is indicated.

Ectopic Eruption

Treatment Considerations

Treatment depends on how severe the impaction appears clinically and radiographically. For mildly impacted first permanent molars, where little of the tooth is impacted under the primary second molar, elastic or metal orthodontic separators can be placed to wedge the permanent first molar distally. For more severe impactions, distal tipping of the permanent molar is required. Tipping action can be accomplished with brass wires, removable appliances using springs, fixed appliances such as sectional wires with open coil springs, sling shot type appliances, a Halterman appliance, or surgical uprighting.

Early diagnosis and treatment of impacted maxillary canines can lessen the severity of the impaction and may stimulate eruption of the canine. Extraction of the primary canine is indicated when the canine bulge can not be palpated in the alveolar process and there is radiographic overlapping of the canine with the formed root of the lateral during the mixed dentition. Even if the impacted canine is diagnosed at a later age (11 to 16), if the canine is not horizontal, extraction of the primary canine lessens the severity of the permanent canine impaction, and 75% will erupt. Extraction of the first primary molar also has been reported to allow eruption of first bicuspids and to assist in the eruption of the cuspids. This need can be determined from a panoramic radiograph. Bonded orthodontic treatment normally is required to create space or align the canine. Long-term periodontal health of impacted canines after orthodontic treatment is similar to non-impacted canines.

Treatment of ectopically erupting incisors depends on the etiology. Extraction of necrotic or overretained pulpally-treated primary incisors is indicated in the early mixed dentition. Removal of supernumerary incisors in the early mixed dentition will lessen ectopic eruption of an adjacent permanent incisor. After incisor eruption, orthodontic treatment involving removable or banded therapy may be needed.

Objectives

Management of ectopically erupting molars, canines, and incisors should result in improved eruptive positioning of the tooth. In cases where normal alignment does not occur, subsequent comprehensive orthodontic treatment may be necessary to achieve appropriate arch form and intercuspation.

Ankylosis

Treatment Considerations

With ankylosis of a primary molar, exfoliation usually occurs normally. Extraction is recommended if prolonged retention of the primary molar is noted. If a severe marginal ridge discrepancy develops, extraction should be considered to prevent the adjacent teeth from tipping and producing space loss. Replacement resorption of permanent teeth usually results in the loss of the involved tooth. Mild to moderate ankylosed primary molars without permanent successors may be retained and restored to function in arches without crowding. Extraction of these molars can assist in resolving crowded arches in complex orthodontic cases. Surgical luxation of ankylosed permanent teeth with forced eruption has been described as an alternative to premature extraction.

Objectives

Treatment of ankylosis should result in the continuing normal development of the permanent dentition. Or, in the case of replacement resorption of a permanent tooth, appropriate prosthetic replacement should be planned.

Toothsize/Archlength Discrepancy and Crowding

Treatment Considerations

Treatment considerations may include, but are not limited to, making space for permanent incisors to erupt and become straight naturally through primary canine extraction and space/arch length maintenance, orthodontic alignment of permanent teeth as soon as erupted and feasible, expansion and correction of arch length as early as feasible, utilizing holding arches in the mixed dentition until all permanent bicuspids and canines have erupted, extractions of permanent teeth, and maintaining patient's original arch form. Other treatment modalities may include, but are not limited to, interproximal reduction, restorative bonding, veneers, crowns, implants, and orthognathic surgery.

Objectives

Well-timed intervention can prevent crowded incisors, increase long-term stability of incisor positions, decrease ectopic eruption and impaction of permanent canines, reduce orthodontic treatment time and sequelae, and improve gingival health and overall dental health.

Space Maintenance

Treatment Considerations

It is prudent to consider space maintenance when primary teeth are lost prematurely. Factors to consider include specific tooth lost, time elapsed since tooth loss, pre-existing occlusion, favorable space analysis, presence and root development of permanent successor, amount of alveolar bone covering permanent successor, patient's health status, cooperative ability, active oral habits, and oral hygiene. If a space analysis is required prior to the placement of a space maintainer, appropriate radiographs and study models should be considered. The literature pertaining to the use of space maintainers specific to the loss of a particular primary tooth type includes expert opinion, case reports, and details of appliance design. Treatment modalities may include, but are not limited to, fixed appliances (e.g., band and loop, crown and loop, passive lingual arch, distal shoe, Nance appliance, transpalatal arch) and removable appliances (e.g., partial dentures, Hawley appliance). The placement and retention of space maintaining appliances requires ongoing compliant patient behavior. Follow-up of patients with space maintainers is necessary to assess integrity of cement and to evaluate and clean the abutment teeth. The appliance should function until the succedaneous teeth have erupted into the arch.

Objectives

The goal of space maintenance is to prevent loss of arch length, width, and perimeter by maintaining the relative position of the existing dentition.

Space Regaining

Treatment Considerations

Treatment modalities may include, but are not limited, to fixed appliances or removable appliances (e.g., Hawley appliance, lip bumper, headgear). Space loss and dentofacial skeletal development may dictate that space regaining not be indicated. This should be determined as the result of a comprehensive analysis. The timing of clinical intervention subsequent to premature loss of a primary molar is critical.

Objectives

The goal of space regaining intervention is the recovery of lost arch width and perimeter and/or improved eruptive position of permanent, succedaneous teeth. Space regained should be maintained until adjacent permanent teeth have erupted completely and/or until a subsequent comprehensive orthodontic treatment plan is initiated.

Anterior and Posterior Crossbites (Dental, Functional and Skeletal)

Treatment Considerations

Crossbites should be considered in the context of the patient's total treatment needs. Anterior crossbite correction can reduce dental attrition, improve dental esthetics, redirect skeletal growth, improve the tooth-to-alveolus relationship, and increase arch perimeter. A simple anterior crossbite can be aligned as soon as the condition is noted, if there is sufficient space; otherwise, space needs to be created first. Such appliances as acrylic incline planes, acrylic retainers with lingual springs, or fixed appliances all have been effective. If space is needed, an expansion appliance also is required. Posterior crossbite correction can accomplish the same objectives and can improve the eruptive position of the succedaneous teeth. Early correction of unilateral posterior crossbites has been shown to significantly improve functional conditions and largely eliminate morphological and positional asymmetries of the mandible. Functional shifts should be eliminated as soon as possible with early correction to avoid asymmetric growth. Treatment can be completed with equilibration, appliance therapy (fixed or removable), extractions, or a combination of these treatment modalities to correct the palatal constriction. Fixed or removable palatal expanders can be utilized until midline suture fusion occurs. Treatment decisions depend on the amount and type of movement (tipping vs. bodily movement, rotation, or dental vs. orthopedic movement); space available; anteroposterior, transverse and vertical skeletal relationships; growth status; and patient cooperation. Patients with crossbites and concomitant Class III skeletal patterns and/or skeletal asymmetry should receive comprehensive treatment as covered in the Class III malocclusion section.

Objectives

Treatment of a crossbite should result in improved intramaxillary alignment and an acceptable interarch occlusion and function.

Class II Malocclusion

Treatment Considerations

Factors to consider when planning orthodontic intervention for Class II malocclusion are facial growth pattern, amount of anterior-posterior discrepancy, patient age, projected patient compliance, space analysis, anchorage requirements, and patient and parent desires. Treatment modalities include extraoral appliances (headgear), functional appliances, fixed appliances, tooth extraction and interarch elastics, and orthodontics with orthognathic surgery.

Objectives

Treatment of a developing Class II malocclusion should result in an improved overbite, overjet, and intercuspation of posterior teeth and an esthetic appearance and profile compatible with the patient's skeletal morphology.

Class III Malocclusion

Treatment Considerations

Treatment of Class III malocclusions is indicated to provide psychosocial benefits for the child patient by reducing or eliminating facial disfigurement and to reduce the severity of malocclusion by promoting harmonious growth. Early Class III treatment has been proposed for several years and has been advocated as a necessary tool in contemporary orthodontics. Factors to consider when planning orthodontic intervention for Class III malocclusion are facial growth pattern, amount of AP discrepancy, patient age, projected patient compliance, space analysis, anchorage (headgear), functional appliances, fixed appliances, tooth extraction, interarch elastics, and orthodontics with orthognathic surgery.

Objectives

Early Class III treatment may provide a more favorable environment for growth and to improve occlusion, function, and esthetics. Although early treatment can minimize the malocclusion and potentially eliminate future orthognathic surgery, this is not always possible. Typically, Class III patients tend to grow longer and more unpredictably and, therefore, surgery combined with orthodontics is the best alternative to achieve a satisfactory result for some patients.

Treatment of a developing Class III malocclusion should result in improved overbite, overjet, and intercuspation of posterior teeth and an esthetic appearance and profile compatible with the patient's skeletal morphology.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

All oral health policies and clinical guidelines are based on 2 sources of evidence: (1) the scientific literature; and (2) experts in the field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Guidance of eruption and development of the primary, mixed, and permanent dentitions is an integral component of comprehensive oral health care for all pediatric dental patients. Such guidance should contribute to the development of a permanent dentition that is in a stable, functional, and esthetically acceptable occlusion. Early diagnosis and successful treatment of developing malocclusions can have both short-term and long-term benefits while achieving the goals of occlusal harmony and function and dentofacial esthetics.

POTENTIAL HARMS

Adverse effects associated with space maintainers include dislodged, broken, and lost appliances, plaque accumulation, caries, interference with successor eruption, undesirable tooth movement, inhibition of alveolar growth, soft tissue impingement, and pain.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Academy of Pediatric Dentistry (AAPD). Clinical guideline on management of the developing dentition and occlusion in pediatric dentistry. Chicago (IL): American Academy of Pediatric Dentistry (AAPD); 2005. 18 p. [133 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 (revised 2005)

GUIDELINE DEVELOPER(S)

American Academy of Pediatric Dentistry - Professional Association

SOURCE(S) OF FUNDING

American Academy of Pediatric Dentistry

GUIDELINE COMMITTEE

Council on Clinical Affairs

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Academy of Pediatric Dentistry. Clinical guideline on management of the developing dentition in pediatric dentistry. Chicago (IL): American Academy of Pediatric Dentistry; 2001. 4 p.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Pediatric Dentistry Web site.

Print copies: Available from the American Academy of Pediatric Dentistry, 211 East Chicago Avenue, Suite 700, Chicago, Illinois 60611

AVAILABILITY OF COMPANION DOCUMENTS

Information about the American Academy of Pediatric Dentistry (AAPD) mission and guideline development process is available on the AAPD Web site.

The following implementation tools are available for download from the AAPD Web site:

- Dental growth and development chart
- American Academy of Pediatric Dentistry Caries-Risk Assessment Tool (CAT)

PATIENT RESOURCES

None available

NGC STATUS

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